

REMARKS

The present Amendment amends claims 1, 3-6 and 8 and cancels claims 2, 7 and 9-17. Therefore, the present application has pending claims 1, 3-6 and 8.

Applicants note that the Examiner considered the Information Disclosure Statement filed along with the present application on February 29, 2000. However, the Examiner did not consider the Japanese references. Copies of said Japanese references are attached herewith so as permit consideration by the Examiner. It should be noted that copies of said references are provided along with copies of an English language Abstracts thereof.

Claims 3 and 12 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention. Various amendments were made throughout claims 3 and 12 to bring them into conformity with the requirements of 35 USC §112, second paragraph. Therefore, Applicants submit that this rejection is overcome and should be withdrawn.

Claims 1-17 stand rejected under 35 USC §103(a) as being unpatentable over Ueda (U.S. Patent No. 5,359,600) in view of Kato (U.S. Patent No. 6,529,523). As indicated above, the present Amendment cancels claims 2, 7 and 9-17. Therefore, this rejection with respect to claims 2, 7 and 9-17 is rendered moot. This rejection with respect to the remaining claims 1, 3-6 and 8 is traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 1, 3-6 and 8 are not taught or suggested by Ueda or Kato whether taken

individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims so as to more clearly describe features of the present invention. Particularly, amendments were made to the claims to more clearly recite that the present invention is directed to a communication apparatus for interconnecting plural kinds of communication networks including an asynchronous transfer mode (ATM) network to transfer information. According to the present invention, a communication apparatus includes plural kinds of first interface for converting plural kinds of control signals or communication signals from plural kinds of communication networks except the ATM network to ATM cells, a second interface for receiving an ATM cell to which a control signal or communication signal is inserted from the ATM network, an ATM switch having a plurality of input ports and a plurality of output ports for outputting the ATM cells received by anyone of the input port from the first and second interfaces to anyone of the plurality of output ports based on header information of the ATM cell and plural kinds of signal processors connected to the subsequent stage of the ATM switch for converting a signal output from the first and second interfaces to the signal format or protocol used by each of the plural kinds of communication networks. Further, according to the present invention, the communication apparatus includes a control part for receiving the ATM cell, which is the output of one of the plural kinds of signal processors and to which a control signal is inserted through the ATM switch, and performing a necessary processing among plural kinds of processing.

The above described features of the present invention now more clearly recited in the claims provides a communication network, a communication apparatus and a control method for it which can achieve connection between plural kinds of communication networks (ATM communication network, STM communication network, IP network) having different signal formats and different communication procedures.

The features of the present invention as described above are achieved by providing a plurality of signal processors for processing different signal forms and procedures depending on plural kinds of communication networks. As per the present invention, according to a request from the communication network, a signal processor is selected and the selected signal processor converts signals to ATM (asynchronous transfer mode) cells according to the classification of the signal after the difference in the signal format and procedure is detected. Thus, the present invention controls transfer of the ATM cells to an interface from any one of the communication networks or a control part for processing a control signal.

Therefore, as is quite clear from the above, the features of the present invention as now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention as now more clearly recited in the claims are not taught or suggested by Ueda or Kato whether taken individually or in combination with each other as suggested by the Examiner.

Ueda provides a monitoring technique for an ATM switching system that monitors the quality of the switch without degrading its throughput. See col. 1, lines 31-34. It is stated in Ueda that a cell is inserted in an overhead space area after the end of an STM-N signal, and the quality of the switch is monitored using the cell. See col. 1, lines 34-63.

Kato realizes a mixed network of ATM network and STM network, absorbs fluctuations of cells in the ATM network, controls the bandwidth between STM switches depending on the traffic of the STM, and decides whether or not to accept an STM cell. See col. 2, lines 31-53.

Kato achieves the above by providing a circuit for mutually converting a time division multiplexed frame of the STM network and cells of the ATM network and means for controlling the time of reading a cell out of a cell buffer in the STM switch, and providing means for monitoring the traffic between the STM switches, means for controlling exclusive band (PVC band) between the STM switches depending on the traffic, and means for deciding whether or not to accept a call from a call setting request from the STM switch in a band management device of an ATM switch. See col. 2, line 54 through col. 4, line 33.

The above described teachings of Ueda and Kato do not render obvious the features of the present invention as now more clearly recited in the claims. In fact, there are numerous differences between the features of the present invention as recited in the claims and each of Ueda and Kato taken individually and in combination with each other. For example, Ueda provides a technique for monitoring an ATM switching system for the quality of a switch without lowering the

throughput. On the other hand, the present invention as now recited in the claims provides a switching system, which can realize connection between plural kinds of communication networks (ATM communication network, STM communication network, IP network) different in signal format and communication procedure by simple control and a control method.

Therefore, Ueda fails to teach or suggest a communication apparatus including plural kinds of first interfaces for converting plural kinds of control signals or communication signals from plural kinds of communication networks except the ATM network to ATM cells as recited in the claims.

Further, Ueda fails to teach or suggest a second interface for receiving an ATM cell to which a control signal or a communication signal is inserted from the ATM network as recited in the claims.

Still further, Ueda fails to teach or suggest plural kinds of signal processors connected to subsequent stage of the ATM switch for converting a signal output from the first and second interfaces to the signal format or protocol used by each of the plural kinds of communication networks as recited in the claims.

Even further yet, Ueda fails to teach or suggest a control part for receiving the ATM cell, which is the output of one of the plural kinds of the signal processors and to which a control signal is inserted through the ATM switch, and performing unnecessary processing among plural kinds of processings as recited in the claims.

The above noted deficiencies of Ueda are not supplied by Kato. Therefore, combining the teachings of Ueda and Kato in the manner suggested by the

Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

As described above, Kato realizes a mixed network of STM and ATM networks, and further absorbs fluctuation of cells in the ATM network, controls the bandwidth between STM switches depending on the traffic of the STM, and decides whether or not to accept an STM call. On the other hand, the present invention as now recited in the claims provides a switching system and a control method for it, which can realize connection between plural kinds of communication networks (ATM communication network, STM communication network, IP network) different in signal format and communication procedure by simple control.

Thus, as is quite clear from the above, Kato suffers from the same deficiencies relative to the features of the present invention as now more clearly recited in the claims as Ueda. Therefore, combining the teachings of Ueda and Kato in the manner as suggested by the Examiner still fails to teach or suggest the present invention as now more clearly recited in the claims.

Accordingly, reconsideration and withdrawal of the above described rejection of claims 1, 3-6 and 8 under 35 USC §103(a) as being unpatentable over Ueda and Kato is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-17.

In view of the foregoing amendments and remarks, Applicants submit that claims 1, 3-6 and 8 are in condition for allowance. Accordingly, early allowance of claims 1, 3-6 and 8 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (572.38256X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Carl J. Brundidge
Registration No. 29,621

CIB/jdc
(703) 312-6600